

Applicants : Kenichiro Kosai *et al.*
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Attorney Docket No.: 55801-003US1
Client Ref. No.: PCT04TL2

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of claims:

1. (Currently Amended) A drug for treating a heart disease characterized by cardiac hypertrophy or tachycardia, comprising an expression vector containing a CD9 gene as the active ingredient and a pharmaceutically acceptable auxiliary or carrier;
wherein the expression vector is a viral vector or a non-viral vector; and
wherein the viral vector is an adeno-associated virus, a retrovirus, a herpesvirus, a herpes simplex virus, a lentivirus, a Sendai virus, a poxvirus, a poliovirus, a symbis virus, or a vaccinia virus.
2. (Cancelled)
3. (Currently Amended) The drug according to Claim 1, wherein the heart disease is an ischemic heart disease.
4. (Previously Presented) The drug according to Claim 3, wherein the ischemic heart disease is myocardial infarction.
- 5-10. (Cancelled)
11. (Currently Amended) The drug according to Claim 1[[0]], wherein cardiac hypertrophy or tachycardia is caused by at least one of HB-EGF (heparin binding epidermal growth factor (HB-EGF), HGF (hepatocyte growth factor (HGF), or angiotensin 2.
- 12-13. (Cancelled)

14. (Currently Amended) A method for treating a heart disease, comprising expressing a CD9 gene administering directly to or via a coronary artery supplying a cardiac muscle in the heart of a subject in need thereof[[,]] an effective amount of an expression vector containing a sequence encoding a CD9 protein;

wherein the heart disease is characterized by myocardial infarction, hypertrophy, arrhythmia, or tachy[[a]]cardia; and

wherein the heart disease is treated by suppressing cardiac hypertrophy or cardiac tachycardia in the subject.

15. (Cancelled)

16. (Currently Amended) The method for treating a heart disease according to Claim 14, wherein the heart disease is an ischemic heart disease.

17. (Previously Presented) The method for treating a heart disease according to Claim 16, wherein the ischemic heart disease is myocardial infarction.

18-23. (Cancelled)

24. (Currently Amended) The method for treating a heart disease according to Claim 14[[23]], wherein cardiac hypertrophy or tachycardia is caused by at least one of HB-EGF(heparin binding epidermal growth factor (HB-EGF)), HGF(hepatocyte growth factor (HGF)) or angiotensin 2.

25-28. (Cancelled)

29. (New) The drug according to Claim 1, wherein the expression vector is a viral vector.

30. (New) The drug according to Claim 1, wherein the expression vector is a non-viral vector.

31. (New) A drug for treating a heart disease characterized by cardiac hypertrophy or tachycardia, comprising a viral expression vector containing a CD9 gene as the active ingredient and a pharmaceutically acceptable auxiliary or carrier;

wherein the viral expression vector is adenovirus; and
wherein expression of the CD9 gene is promoted by a Rous sarcoma virus (RSV) promoter.

32. (New) The drug according to Claim 31, wherein the heart disease is an ischemic heart disease.

33. (New) The drug according to Claim 32, wherein the ischemic heart disease is myocardial infarction.

34. (New) The drug according to Claim 31, wherein cardiac hypertrophy or tachycardia is caused by at least one of heparin binding epidermal growth factor (HB-EGF), hepatocyte growth factor (HGF), or angiotensin 2.

35. (New) The method for treating a heart disease according to Claim 14, wherein the expression vector is a viral vector or a non-viral vector.

36. (New) The method for treating a heart disease according to Claim 35, wherein the viral vector is an adenovirus, an adeno-associated virus, a retrovirus, a herpes simplex virus, a lentivirus, a Sendai virus, a poxvirus, a poliovirus, a symbis virus, or a vaccinia virus.

37. (New) The method for treating a heart disease according to Claim 36, wherein the expression vector is adenovirus.

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38. (New) The method for treating a heart disease according to Claim 37, wherein the heart disease is an ischemic heart disease.

39. (New) The method for treating a heart disease according to Claim 38, wherein the ischemic heart disease is myocardial infarction.

40. (New) The method for treating a heart disease according to Claim 35, wherein the non-viral vector is a cationic liposome, a membrane-fusing liposome, or a cationic polymer.

41. (New) The method for treating a heart disease according to Claim 40, wherein the heart disease is an ischemic heart disease.

42. (New) The method for treating a heart disease according to Claim 41, wherein the ischemic heart disease is myocardial infarction.